From virtual nursing to virtual care teams: Where AI moves the needle

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Over the last several years, virtual care has expanded well beyond traditional telehealth and virtual nursing. Initially adopted to expand nursing capacity, organizations now deploy virtual care as integrated, technology-enabled care teams. These virtual care teams bring together pharmacists, social workers, care navigators, and other clinicians to deliver coordinated, multidisciplinary care.

Persistent workforce shortages, rising costs, and growing patient expectations are all driving investments in technologies like artificial intelligence (AI). As health systems respond, AI is emerging as a core enabler of scalable care delivery.

Organizations that deploy AI in isolation or limit virtual care to nursing will fall short. In contrast, those that embed AI across multidisciplinary teams are better positioned to deliver sustainable, high-quality care at scale.

More roles are moving to virtual settings

As virtual care matures, clinician location is becoming less relevant to care quality.

For example, pharmacists can review medications and apply predictive adherence analytics from centralized hubs across multiple hospitals. Social workers engage patients remotely, while case managers monitor high-risk populations across facilities from a single interface.

In-person functions, such as care transitions and patient education, now operate effectively through secure video, AI-assisted documentation, and ambient monitoring. These tools help keep remote clinicians as informed and responsive as bedside teams.

The result is a distributed, always-on care model defined not by geography or staffing ratios, but by connectivity and access to the right clinical tools.

Why AI matters now

Do virtual care teams alone deliver enough efficiency in today's environment? Clinician burnout, turnover, and cognitive overload continue to constrain care delivery, and technology alone has not resolved these challenges. While virtual care has successfully expanded access, many organizations still lack the advanced tools needed to support teams and sustain long-term ROI.

AI changes that equation. When embedded intentionally, AI shifts workflows from reactive to proactive. For example, AI can automate routine tasks, surface real-time clinical insights, and enable care teams to focus on higher-value patient care.

Support for AI in healthcare is also growing. In 2024, **64% of patients** supported their providers using AI, **65% of physicians** saw a clear advantage, and **64% of nurses** said they wanted more AI-enabled tools.[1]

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Where AI delivers value

- **Care team efficiency:** Generative AI reduces documentation burden and supports patient intake and triage. Ambient monitoring tools alert virtual nurses to changes in patient status without adding cognitive load. Clinicians remain accountable for reviewing, validating, and acting on AI-generated insights, preserving clinical judgment and safety.
- **Patient safety:** AI-enabled computer vision and monitoring tools detect early signs of clinical deterioration, reduce fall risk, prevent pressure injuries, and flag behavioral changes requiring follow-up.
- **Patient experience:** Predictive tools anticipate patient needs, enabling more coordinated services, personalized education, and clearer discharge planning. These capabilities help reduce readmissions and improve health literacy.

How to implement AI effectively

Realizing AI's value requires more than selecting the right technology. Organizations should:

1. Define goals first.

Begin with a comprehensive AI evaluation to determine where the technology adds the most value and which workflows are optimal for automation or enhancement. A structured approach to goal setting ensures that AI implementation aligns with organizational goals and priorities while maximizing both clinical and operational benefits.

2. Prioritize integration.

Embed AI directly into clinical workflows rather than layering it on top. Seamless integration accelerates adoption, reduces burden, and ensures AI complements existing processes. This approach enables care teams to harness AI capabilities efficiently while maintaining continuity and quality of care.

3. Engage frontline staff.

Involve clinicians early in design and implementation. Early engagement surfaces workflow risks and builds trust and transparency before go-live.

4. Build for sustainability.

A proactive adoption and performance program, not just a go-live checklist, ensures ongoing optimization and change management.

5. Consider the patient.

Use transparent communication, strong privacy safeguards, and patient education to build trust in AI-enabled care.

6. Evaluate safety.

Develop specific, comprehensive governance processes for evaluating the safety and effectiveness of all AI solutions. These processes should consider both safety concerns with the models themselves, such as bias, as well as safety concerns that might stem from their integration into human workflows, like overreliance.

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Why you should measure ROI broadly

A narrow focus on direct cost savings misses the full picture. Collecting a broad range of data empowers organizations to showcase their impact across both clinical and operational areas. By considering these broader data points, organizations can highlight indirect benefits, uncover unexpected improvements, and provide a more comprehensive picture of their overall performance.

Organizations should measure:

- **ROI:** Financial, operational, and workforce outcomes, including reduced overtime and agency spend, fewer adverse events, shorter length of stay, improved throughput, higher clinician satisfaction, and lower turnover.
- **Operational impact:** Improvements in patient experience, care transitions, and data completeness can reveal meaningful performance gains.

The future: Extending AI across the care team

As virtual care expands beyond nursing, AI empowers organizations to extend specialized expertise to new settings:

- **Pharmacy:** In addition to widespread pharmacy operations automation, remote pharmacy technicians, empowered by AI-driven medication adherence analytics, deliver specialized pharmacy support to rural hospitals that lack onsite staffing. This approach enhances medication management, supports patient safety, and ensures consistent pharmaceutical care in underserved areas.
- **Care navigation:** AI-powered solutions assist care managers in guiding patients through complex care transitions, advancing health literacy, and minimizing avoidable healthcare utilization. These tools facilitate personalized care coordination and support improved patient outcomes.
- **Patient engagement:** Proactive AI outreach connects patients and their families to care between clinical encounters, thereby reducing unnecessary emergency department visits and promoting continuity of care. This strategy strengthens patient-provider relationships and supports long-term health management.

Conclusion

AI-enabled virtual care teams represent one of the most actionable opportunities to address workforce challenges, improve outcomes, and build more resilient operations. Organizations that move forward with a clear strategy, engaged teams, and a commitment to measuring what matters will lead the next phase of care delivery. Health informatics can be a leading partner to success in the implementation and long-term adoption of these programs.

Optum Advisory's Provider Technology Consulting practice supports organizations in moving from early AI concepts to sustainable, governed operating models. Through Rapid AI evaluations, strategy-aligned road mapping, and virtual care team design, we help establish clear governance, prioritize high-value use cases aligned to organizational objectives, and embed AI seamlessly into clinical and operational workflows to deliver measurable, long-term ROI.

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Need help moving to a sustainable virtual care model?

Optum Advisory's Provider Technology consulting practice has experts to support your organization's transition to a clearly governed and profitable virtual care team design. Get in touch at **advisory.com/optum-support.**

Endnote

1. Navigating the intersection of AI and virtual care. Teladoc Health. Accessed March 26, 2026.

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